BIOGRAPHY

WILLIAM BYRD and the ROYAL SOCIETY

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> "The country where fortune hath cast my Lot, is a large feild for natural inquirys, and 'tis much to be lamented, that we have not some people of skil and curiosity amongst us. I know no body here capable of makeing very great discoverys, So that Nature has thrown away a vast deal of her bounty upon us to no purpose."—William Byrd to Sir Hans Sloane, Virginia, April 20, 1706. Original Papers of Sir Hans Sloane, v. 4041, f. 151, Br. Mus.

Unmeasured stretches of land where tobacco would grow and blossom and attain its sweet maturity were the visions that Virginia in the late seventeenth century brought to the eyes of many English folk whether they loved the weed or reaped the profit of its vending. To other English eyes it was a region where black men could be sold to labor in those same tobacco fields. To various folk it was a haven where they might slip into oblivion or begin anew and find prosperity of a kind. Some saw there a King's domain where his favored subjects might have something of sway and fortune under his royal bounty. But to a group of men who gathered together in London and had been meeting in such gatherings since 1662 with a constant purpose to labor "for the improvement of Natural Knowledge", though with a personnel that shifted with the passing of generations, Virginia was an unknown land that yet had to yield up most of even its patent secrets to the inquiring mind of man. These men called themselves the Royal Society. They sought knowledge of strange and perplexing phenomena from far and near. They welcomed like-minded men from whatever land they came, be it but that they could help to push further the bounds of knowledge. To this choice group there came under the happiest of auspices in 1696 young William Byrd of Virginia.

Though but twenty-two years old the youthful Virginian was welcomed by these older men of attainment and position. His sponsor was Sir Robert Southwell. Byrd's education in England had been supervised by Southwell who esteemed his protege highly.[1] His official positions and services never weaned Southwell from his literary and scientific interests.[2] Constantly he manifested, and often through the channel of the Royal Society,[3] his curiosity and zest for knowledge from the New World, the "Goulden World" of Columbus as he called it.[4]

At a meeting of the Royal Society on April 29, 1696, with Sir John Hoskyns, the vice-president in the chair, Byrd was elected a member of that body. Others voted in on that day included Baron Scarlati, Seignor Viviani, Mr. Orlando Bridgman, Mr. John Harris, Seignr. Bonfigliolo and Mr. Bidloo.[5] Young Byrd was present and in the phraseology of the Society, "Subscribed the Obligation". In this first meeting as a member of the Society Byrd saw "a parcell of the Earth found at a place called Duraclea, near Smyrna, which naturally", so ran the minutes of the meeting, "Contains an Alcalizate Salt, and is used at Smyrna to make Soap." He also heard read a letter describing "Severall Large Bones of a Fish, Sup-

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[1] Southwell to Sir Hans Sloane, Spring Garden, Dec. 15, 1699, Sloane Mss. 4037, f. 359, Br. Mus.; undated letter of Southwell to Sloane, Sloane Mss. 4061, f. 38, Br. Mus.

[2] *The Petty Southwell Correspondence* 1676-1687, edited from the Bowood Papers by the Marquis of Lansdowne (London, 1928), passim.

[3] *Transactions of the Royal Society* (London, 1665-.....) and journals of the Royal Society in manuscript in the archives of the Society in London.

[4] Southwell to Petty, Kingsweston, Aug. 13, 1687, *Petty-Southwell Correspondence,* 281.

[5] Journal Royal Society, April 29, 1696. The members elected at this meeting had been passed upon by a Council called on April 22, to meet on the following Wednesday. Journal Royal Society, April 22, 1696. Thomson, Thomas; *History of the Royal Society from its Institution to the End of the Eighteenth Century* (London, 1812), xxix, lists those elected and admitted that day in addition to Byrd thus: Edward Smyth, D. D., Dean of St. Patrick's; afterwards Lord Bishop of Down and Connor; Mons. Pomponius Baron de Scarlotti; Sig. Vincentio Viviani, of Florence; Sig. Fornassari, of Bononia; Orlando Bridgeman, Esq.; afterwards Sir O. Bridgeman, Kt.; John Harris, M. A.; afterwards D. D.

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posed of a Sort of Grampus lately dug up, the bones of the head being about 3 foot long, and 2 foot 3 Inches broad". A further wonder of the world presented on that April day in London to this gathering of men, who would know all things to be made known, was the "very large Horns of a Beast of the Goat kind now in the possession of Mr. Doyly in the Strand."[6]

This young Virginian among these English intellectuals had come by his interest and curiosity in the wonders of the natural world by right of paternal influence as well as friendly associations with his English mentor Sir Robert Southwell and his coterie. His father in Virginia had been constantly alive to the unfathomed secrets of that land. Though he had given his most earnest efforts to his long pack caravans that journeyed southwest to traffic with the Indians and to his other commercial and planter interests the elder William Byrd had had time and inclination to pick up stray bits of knowledge about plants and seeds and other resources of his adopted home in the New World.

On the request of Lord Howard Effingham who had dwelt some years in the New World as Governor of Virginia and was just then returning home, the elder Byrd shipped to England some walnuts and hickory nuts and seeds of the ubiquitous persimmon, which he called the "Pishamin".[7]

The elder Byrd wrote to London for a treatise or two on minerals and stones, asking for the fittest for his purpose, either "Mr. Boyles or any other English author".[8] He asked as well for the last edition of Salmon's Polygraphice[9] and some

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[6] Journal Royal Society, April 29, 1696.

[7] Byrd the elder to Thomas Methwold, Va., March 5, 1688/89, *Va. Mag. Hist. & Biog.*, xxv, 363.

[8] Robert Boyle, the natural philosopher and chemist, published in 1672 *"An Essay about the Origin and Virtues of Gems"*. It was to this sketch that Byrd evidently referred.

[9] William Salmon, an irregular medical practitioner in London, treated all diseases and sold varied medicines of his own make, as well as casting horoscopes and professing alchemy. He published in 1672 a volume known as *Salmon's Polygraphice, the Art of Drawing, Etching, Limning, Painting, Washing Varnishing, Colouring and Dyeing.* The

to "Represent the thing to Mr. Banister as indeed it is, & let him not be disheartened at our present poverty—but proceed in the Noble Design of Improving a Natural Knowledge that comes so near ye Divine which alone can make us rich unto Salvation."[15] And Plukenet promised to get for Byrd before he left England if possible a copy of Ray's first part of his General History of Plants.[16]

While in England the elder Byrd evidently went out to Oxford and visited Jacob Bobart, professor of botany there.[17] On his return to Virginia early in 1687/8 he brought back trees and shrubs that the Oxford botanist had packed for him. Soon after his return to Virginia the elder Byrd was dispatching to his merchants in London samples of crystal rocks brought from a distance of forty miles above the Christian settlements by his Indian traders. The merchants were to have then examined and report on their probable value.[18] Thus the father had in a fashion been exhibiting the same keen curiosity in Virginia's resources both from the point of view of profit and of knowledge, that were later to be manifested by the son, and that were to hold his interest as a fellow of the Royal Society for nearly half a century.

Soon after his election to the Society the younger Byrd returned to Virginia for a stay of some months. In his absence the Society had several times discussed the cause of the blackness of negroes. This phenomenon baffled their knowledge but provoked varied theories. Doctor Tyson, whose medical knowledge and studies of animal anatomy based on dissection, gave him wide reputation as an authority, advanced the theory of Pochlinus that "the black colour in negros skins came from

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[15] Plukenet to Byrd, Sloane Mss., xxxii, 4067, f. 105, Br. Mus.

[16] Ibid.

[17] *Va. Mag. Hist. & Biog.*, xxv, 254, note 3. Bobart had sent the elder Byrd a gift of roots and seeds including Iris, Crocus, Tulips and Anemones in 1684. Byrd to Jacob Bobart, May 20, 1684, *Va. Hist. Reg.*, i, 114.

[18] Byrd to Perry and Lane, Va., June 16, 1688, *Va. Mag. Hist. & Biog.*, xxv, 259; Byrd to Hon. Charles Howard, Va., June 16, 1688, Ibid., 260.

samples of ore, especially lead, tin or silver for ignorance, he said, had made him neglect some things he thought might be of value.[10]. While in England in 1687 the elder Byrd was in communication with Leonard Plukenet, the botanist, Dr. Martin Lister, the zoologist and others interested in natural history.[11] He talked over with them the work of John Banister, the missionary naturalist, who had been professor of botany at Oxford and had come to Virginia many years before after traveling in the West Indies.[12] Banister was an intimate of the elder Byrd who was known as his patron.[13]

Byrd discussed with them Banister's collection of Virginia specimens[14] and they gave promises to Byrd for Banister of their continued support financially of his endeavours though they could not then make a contribution. Byrd was charged

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work described ways of depicting passions and emotions in portraiture as well as the mechanical parts of art. It included advertisements of Salmon's pills, claimed to be "good for all diseases".

[10] Byrd the elder to John Clinton, Va., May 26, 1686, *Va. Mag. Hist. & Biog.*, xxv, 129.

[11] Letter of Leonard Plukenet addressed "To Colnl Byrd A little before he went to Virginia". The letter is undated, much scratched and written in a cryptic hand that makes it very difficult to decipher. Sloane Mss., xxxii, 4067, f. 105, Br. Mus. It is addressed on the back "Hon Colnl Byrd—Mr. Banister's Patron in Virginia".

Byrd's reply to Plukenet's letter arranging for a meeting with Dr. Lister and others interested in botany and Banister's investigations in Virginia follows:—

December ye 14th 1687

Note 11—cont'd . . . . Worthy Doctr

Last night I came to Towne & recd yor oblidging Letter Mr North & myselfe will bee sure to wait on Dr. Lister yorselfe & the (ms. torn) of those worthy Genl at ye time and place appointed & I shall take it as a great obligation to

Sr

Your most Humble
Servant
Wm Byrd

This letter was addressed "To the Worthy Doctr Leon Pluknett in the old Palace Yard—In Westminster". Sloane Mss., xxvii, 4062, f. 226, Br. Mus.

[12] Blanton, Wyndham B., *Medicine in Virginia in the Seventeenth Century* (Richmond, 1930), 215-216.

[13] Plukenet to Byrd, Sloane Mss., xxxii, 4067, f. 105, Br. Mus.

[14] Banister made a list of the plants of Virginia. It was published in Joannis Raii *Historiae Plantarum* (London, 1688). Some of his specimens gathered in seventeenth century Virginia were among the nucleus of the British Museum.

vessels in a paticular body between the skin & epidermy wch were full of black liquor".[19]

Doctor Tyson "was of opinion that the climate might alter the glands so that they might separate from ye mass of blood a differing humour from white to be circulated in those particular cells, & that the climate might by this means give a different hue to the inhabitants."[20]

Sir John Hoskyns thought the blackness was caused "by glands immediately lying under the skin and that the blacknesse proceeded from some particular propriety of the country where that Race of men have been produced as of the southern parts of Africa, and not from the heat of the climate for that in other parts of the same climate, otherwise colourd people were found".[21]

This topic was still live when Byrd returned to London after his visit home to Virginia.[22] At a meeting on July 20, 1697, he told the Society that he had seen a "Negroe who had his Skinn part white part black or dapled was born in Virginia of black parents, who was well till 3 years old & now was Speckled of his breast and back and that no fancy had taken the Mother".[23]

This eleven year old negro boy, who had formerly belonged to Major Taylor in the upper parts of the Rappahannock River, in Virginia, had been brought to London by Sir Charles

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[19] Minutes of Royal Society, Dec. 9, 1696, Sloane Mss., 3341, f. 25, Br. Mus.

[20] Ibid.

[21] Minutes of Royal Society, Dec. 23, 1696, Sloane Mss., 3341, f. 28, Br. Mus.

[22] During this year in Virginia young Byrd had been drawn into political action. He was elected a Burgess from Henrico county for the Assembly that met in the autumn of 1696. (*Journal of the House of Burgesses of Virginia,* edited by H. R. McIlwaine, Richmond, Va., mcmxiii, viii). When he returned to England it was as the agent of his father and Governor Andros to defend them against the accusations of Commissary Blair. (*Historical Collections Relating to the American Colonial Church,* edited by William Stevens Perry, vol. I, Virginia. Printed for the subscribers, mdccclxx, 36-67).

[23] Journal Royal Society, July 20, 1697; Minutes of Royal Society, July 20, 1697, Sloane Mss., 3341, f. 54, Br. Mus.

Wager,[24] the redoubtable naval commander who sailed the seven seas and like the sea dogs of Elizabeth's day fought and found fortune in the Spanish main. Several persons at the meeting had seen the boy and testified to the truth of Byrd's account.[25]

Four months later at the meeting on November 10 the discussion turned again to the color of the skins of negroes and especially to the changes that had happened to the negro boy Byrd had mentioned at the earlier meeting. In the interval other members of the Society had seen the dappled negro boy in London. Byrd gave a fuller account of the case and the Society asked him to write out the account of the phenomenon that it might be preserved in their records. Byrd promised to have it ready by the next meeting.[26] Just a week later he read his account before the curious fellows of the Royal Society.[27]

Two unique and troublesome specimens that Byrd had brought on his voyage from Virginia were presented to the Society by that young man at the same July meeting at which he told first of the negro boy. The simple entry in the Journal is perhaps the most worthy record of the presentation. The secretary recorded, "Mr. Bird presented to the Society a live Rattlesnake brought from Virginia by him in a box wherein he had lain 7 months without food, the members present saw him in the box very lively and ordered Mr. Hunt should take care of him."[28] Mr. Henry Hunt, the clerk who was also the curator of the Society's collection, was often articulate at the meetings but there is no record of his response on this occasion.

Mr. Byrd's second specimen, the secretary recorded, was "another strange Creature called an Opossum from the same

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[24] An Account of a negro-Boy that is dappel'd in several Places of his Body with White Spots. By Will. Byrd, Esq. F. R. S., *Philosophical Transactions,* xix, 781.

[25] Journal Royal Society, Nov. 10, 1697.

[26] Ibid.

[27] Journal Royal Society, Nov. 17, 1697. The paper was ordered to be registered with the possibility that it might be published in the Transactions. It was printed in the *Philosophical Transactions,* xix, 781.

[28] Journal Royal Society, July 20, 1697.

England divine, Cotton Mather, was seeking election to the Society he sent a letter with data on various natural curiosities in New England. His manuscript included "Observations on the Rattle Snake and On Rain Bows", as well as "the tale of a squirrel runing from the top of a tree into the jaws of a rattlesnake underneath looking at him."[34]

The opossum Byrd presented came to an untimely end on February 23, 1697/8, after some months abode with the Royal Society. When Mr. Hunt reported its death to the Society he was instructed "to take a figure of it, and to desire Dr. Tyson to anatomize it . . . . . especially to take care to look into the Structure of its Taile with which it holds itself to Trees and its Uterus and bagg".[35]

On March 2, so runs the record, "Dr. Tyson gave an Account of the opening the Body of the possum mentioned last meeting, he found it dyed with a hole in its Stomach, eat through all the Coats of it, he said he had seen the like in a Mens body which he took to come from a Scrophulous disposition of the great Glands of the Stomachs Coats. He found the parts of Generation little differing from other Animals and yt it was not possible for the young ones to be Conceived or bred in its pouch under its belly, the Hind feet had a Thumb and nails contrary to the fore feet which had 5 Claws. Dr.

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[34] Journal Royal Society, Dec. 10, 1713. At a meeting ten years later a letter from Cotton Mather was read setting forth "a Multitude of Authorities from Antient Writers, Historians Poets and Naturalists concerning the Existence of serpents or snakes of Enormous Sizes from 80 to 100 & 120 foot in length in order to introduce an Account of the Skeleton of a Supposed Snake of a monstrous Size found lately in Virginia. . . . "Journal Royal Society, Dec. 5, 1723. Byrd's gift of the rattlesnake did not, however, first arouse the interest of the Society. As early as 1683 the subject was under discussion and there was published in the *Philosophical Transactions,* xiii, 25, Vipera candesona Americana, or the anatomy of the rattlesnake; dissected at the repository of the Royal Society in January, 1683, by Dr. Edward Tyson. John Clayton, the minister at Jamestown more than ten years before Byrd made his gift of the rattlesnake, referred in a letter to the Royal Society to the rattlesnakes that "Col. Cleyborn" (Secretary William Claiborne) had sent to the Society some years before. It is possible that Tyson's article was based on the dissection of these specimens sent from Virginia before 1683. (Neill, Edward D., *Virginia Carolorum,* Albany, 1886, 384).

[35] Journal Royal Society, Feb. 23, 1697/8.

place, it had a pounch under his Belly wherein the young ones entred whenever they were put to it, it was comitted to ye same persons care, Mr. Bird who was present had the thanks of the Society for so great a present."[29]

Less startling to the inquiring minds assembled together that same day in Gresham College was the large rattlesnake, preserved in rum, that Mr. Petiver, a naturalist, had had from Virginia. But though Mr. Petiver's rattlesnake was not so provocative in death as was Mr. Byrd's with its all too visible signs of life, the former reported to the Society that his female specimen on dissection had proved to be the potential mother of seventeen baby reptiles all of which on examination gave evidence of being true vipers.[30]

Byrd's gift rattlesnake appeared only once again in the records of the Society. More than two years later he presented to the Society "the Exuvie of the Rattlesnake", says the secretary, "which he had when it was alive". The skin was reverse and something was peculiar about the eye but this the secretary failed to record, leaving a blank space in the minutes and a mystery to the years. The snake had died with cold, reported Byrd, within ten days after parting with its skin.[31]

After Byrd had presented his trophy from the Virginia snake, a fellow of the Society told them of a person in Barbary who had killed a snake by separating its head and then was killed himself some hours later by being bit by the head.[32] The Royal Society continued its interest in rattlesnakes and frequently the ways and the wiles of that reptile were discussed at its meetings. Some ten years later when the New

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[29] Ibid. The name is almost constantly spelled Bird in the records of the Royal Society.

[30] Ibid.; Minutes of Royal Society, July 20, 1697. Sloane Mss., 3341, f. 55, Br. Mus. James Petiver who had an apothecary shop in Aldersgate-street, London, was an active member of the Royal Society and collected a museum of specimens in natural history for which Sir Hans Sloane, a fellow collector, offered him £4,000. He wrote a number of works on natural history including Pterigraphia Americana: Icones continens plusquam ecce Filicum variarum Specierum. Tab. 20, 1712, Fol. (Thomson, *History of the Royal Society*, 23-4.)

[31] Journal Royal Society, Feb. 7, 1699.

[32] Journal Royal Society, July 16, 1713.

Hook conjectured that this Contrivance might help the Creature to climb and gett up to a Branch when it had rested by means of the Tail. Dr. Tyson was thanked for his great care in this matter."[36]

Byrd's gift, the Virginia opossum, furnished Dr. Tyson, who was the first physician in England to publish a number of monographs on particular animals based on dissection, with the subject for one of these studies. His monograph on this, the first thorough dissection of the female Virginia opossum, he published in 1698.[37]

Young Byrd's other contributions to the Royal Society in these years were not so spectacular as the rattlesnake and the opossum. At an early autumn meeting of 1697 "Mr. Bird said that in the upper part of Potomock river in Virginia is a tree larger but like a maple whose juice is by sun or fire boild to sugar 8 lb. of which will make one of white sugar better than sugar from cane."[38]

On one occasion he gave "an Account of a Feather found in the Gall bladder of Mr Wallop, he said it adhered to the Gall stones in the Vesicula fellea," record the minutes, "and he was very Confident it was in the Gall before opening & did not come there accidentally after."[39]

Another time he presented "an artificial Cup made to resemble Agatt, it seemed to be a kind of paste polished he had

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[36] Journal Royal Society, March 2, 1697/8. About forty-five years later the Royal Society again turned its attention to the Virginia opossum when Peter Collinson sent a letter to that body communicating a paper he had received from Dr. John Mitchell of Urbanna, Virginia, giving an account of the anatomy of the male and female opossum. Journal Royal Society, Feb. 10, 1742/3. Dr. Mitchell also followed up another topic Byrd had discussed before the Society, the color of negroes. On June 14, 1744, Collinson presented to the Society a paper by Dr. Mitchell on that topic. Journal Royal Society, June 14, 1744. This paper was published in the *Philosophical Transactions*, xliii, 102. Dr. Mitchell was elected a fellow of the Society in 1748.

[37] Carigueya, seu Marcupiale Americanum; or, the anatomy of an opossum (didelphis marsupialis): dissected at Gresham College. By Edward Tyson, M. D., F. R. S., *Philosophical Transactions*, 1698, xx, 105.

[38] Ms. evidently minutes of Royal Society though not so headed, dated Oct. 20, 1697, Sloane Mss., 4062, f. 354, Br. Mus.

[39] Journal Royal Society, Oct. 27, 1697.

it of Monsr Hubin". For this Byrd had the thanks of the Society.[40]

When Sir Hans Sloane, for many years physician to the sovereign of England, and the intellectual cornerstone of the British Museum through his tireless labour in all fields of natural knowledge and his rich collection of specimens, showed to the Society an Indian arrow head from Maryland, Byrd informed the Society that such arrows were made of white flint.[41] Byrd's interests ran to botany as well as mineralogy and zoology, and, in fact, were most pronounced in that field, as later years were to prove. As a curiosity that again elicited for him the thanks of the Society he showed them "the Skeleton of an Oak leaf which was all Eaten away except the Fibres."[42]

The nature of the discussions and Byrd's share in them is exhibited well in the minutes for February 5, 1700:

> "Sr John Hoskins in the Chair.
> Dr. Woodward said that Figuerva in his Travells, had given an Account of the Salt Soil near Gomroon, and the Isle of Ormus.
> Sr. Robert Southwell said that a portuguese Travellor had told him that in the Mountains, called the Mountains of the Moon were large Salt Rocks.
> Dor. Sloane said, that he thought there was no Nitre or Salt petre anywhere produced in Grounds Exposed to the Sun, and Raines. And that in Jamaica though great Noise was made of Salt petre Grounds, yet Such Salt was a sort of Natranea, and the Salt petre there made was only of Batts dung and earth in Subterraneous caverns.
> Dor. Hooke said, Mr. Whiston had told him that he had made Salt Petre in Gambo of the Earth in the Country.
> Mr. Bird said the Indians made their best Glew of the Nerves of Deer.
> Sir Robert Southwell said, that the best and lightest Armour was made of Bulls Pizzles Fibres laid cross one another to the thickness of a Finger.
> A note was read of the largeness of a Sandwich Carrott

[40] Journal Royal Society, Feb. 15, 1698/9.
[41] Journal Royal Society, March 1, 1698/9.
[42] Journal Royal Society, Dec. 17, 1701.

it was 5 lb 5 ounces weight, 17 Inches 1/4 round, and 15 Inches Long.
Mr. Bird said that they Extracted vast quantities of Spirits in Virginia, from peaches Mash'd and fermented.
An Observation of Docr Havers on the Dissection of a person who had the Belly Ache was read. He was thanked."[43]

That Byrd shared his observations of Virginia, though he had spent only a small portion of his limited years in that colony, with Sir Robert Southwell was attested at the meetings of the Society. At the session on July 13, 1697, "Sr Robt Southwell related that Mr Bird told him that the Indians were very patient in hunting and that they Stalkd on all four with the Horns & some of the Skinn on their head to deceive Deer, and that they used ashes in want of common Salt".[44]

Other folk than the elder and the younger Byrd were here and there tapping the secrets of that portion of the New World called Virginia. Two "humbing" birds from Virginia were presented to the Society by Captain Jos. Geoffreys.[45] A box of curiosities from Virginia was added to the Society's collection. It included "the Maiz or Indian Corn of several Colours, the same with 5 spikes from the same Stalk, Sergum[46] an Eagles foot the exuviae of a Serpent, Virginia Snakeweed, a Rhinoceros Beetle, a Silkworm in his bag, Some Shells and Seeds. The seeds were order'd to be divided between the Dutchess of Beaufort, the Bishop of London, Dr. Nurdale, Mr Waller, Mr Dubois and Mr Doody after reserving a sample of Each for the Society."[47]

(To be continued)

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[43] Journal Royal Society, Feb. 5, 1700/01.

[44] Journal Royal Society, July 13, 1697; rough draft of minutes of Royal Society, July 13, 1697, Sloane Mss., 3341, f. 52, Br. Mus.

[45] Journal Royal Society, June 28, 1699.

[46] Sorghum, probably.

[47] Journal Royal Society, Dec. 3, 1701.